LED News

LED manufacturers introduce their latest commercial offerings

THE pace of commercial development of LEDs continues to hot up, with a number of major manufacturers introducing new products in recent weeks.

Sharp Microelectronics of the Americas (SMA) based in Camas, WA, USA, has unveiled its first single chip white LED. The imitation white light is obtained by the integration of a blue InGaN LED die and a YAG phosphor into a single package. SMA says the LED offers a low power alternative to short-lived incandescent lamps. Applications include instrument panels for automobiles, electronic signs, backlights in portable tools and instruments, and general-purpose illumination. "We excel in making LED chips smaller and thinner, thus reducing the thickness of the whole module." says Vijay Auluck, Senior Product Marketing Manager for SMA. The GM5WT95200A is a 3.4 mm x 2.8 mm x 1.9 mm surface mount LED with a viewing angle of 120°. Typical luminous intensity is 200 mcd under 20 mA drive current conditions. Additional single-die white LEDs in surface mount and through-hole packages will be introduced later this year, the company says.

Hewlett-Packard Co (HP) of Palo Alto, CA, USA, has brought out high-brightness AlInGaP red and amber (HB-LED) lamps intended primarily for automotive interior lighting. Likely applications include backlighting for telltale indicators in instrument clusters, and LCD backlighting of status indicators, audio systems and air control panels. The HB-LEDs come in a 3.2 mm by 2.8 mm surface-mount package, equivalent in form and functionality to the Siemens TOPLED – widely accepted by major European car manufacturers. They provide typical luminous intensities of 100 mcd at 20 mA drive currents over a 120° viewing angle.

The LEDs are manufactured using HP's flip-chip technology, which involves soldering chips on their sides, eliminating the expensive wire-bond process. HP says that this provides improved reliability and permits a -55°C to +110°C operating-temperature range.

Cree Research Inc (Durham, NC, USA), meanwhile, has expanded its product portfolio with the addition of high performance blue and green LEDs. The chips are made from InGaN materials grown on Cree's proprietary SiC substrate and are offered in two versions of blue (450 and 470 nm) and two green versions (505 and 525nm). This new family of products, which first shipped in limited quantities in late 1998, increases brightness up to 300% over previous LED devices produced by Cree. They are now available in production quantities. Target applications for the products include white light LED illumination, cellular handset backlighting, full-colour video display signs and traffic signals.

In other LED news, Uniroyal Technology Corp began shipping its high brightness blue and green products in its second quarter, which ended 28 March, 1999. The company reports strong interest, particularly in the blue HB-LEDS, with the order backlog already approaching $2 million. Uniroyal expects phase one of its 7150 m^2 facility in Tampa, Florida, USA, a joint venture with EMCORE, to be fully operational by the end of the current quarter. The facility will also produce red, orange and yellow LEDs.

Another business tie-up has seen SLI Inc (Canton, MA, USA) reach a joint marketing and sales agreement with Stanley Electric (Tokyo, Japan), one of the world's largest LED manufacturers. This agreement will bring to SLI (formerly Chicago Miniature Lamp) a full range of LED technologies, including white LEDs.

Company News

Design wins boost Alpha's earnings

DESIGN wins for GaAs ICs in a range of Motorola cellular phones contributed to a 42% increase in fourth quarter net income to US$8.5 million for Alpha Industries (Woburn, MA, USA). It also saw the company post a record net income for the full year of $21.5 million, up from $10.3 million a year earlier.

The company's net sales for the year, also the highest in company history, were $126.3 million, compared with $116.9 million for the prior year. For the quarter, Alpha's Wireless Semiconductors segment had sales of $19.5 million and generated $2.7 million in operating profit.

Strong market acceptance of new Motorola digital handsets has been a primary driver of this growth. Alpha's components feature in nearly every new Motorola handset, with the two highest highest content units being the CDMA StarTAC™ and the dual-band GSM V-phone, the V3688. The later phone weighs only 83 grams and is now being shipped in large volumes to Europe and Asia. It features a multi-function GaAs IC PHEMT switch and a 3 V GaAs power amplifier.

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